REMARKS

I. Present Status of the Application

The Office Action rejected claims 1 and 2 under 35 U.S.C. § 112, ¶ 2, as being indefinite; and rejected, under 35 U.S.C. § 103(a), claim 1 as being unpatentable over Kobayashi (JP 06-017040) in view of Richard et al. (US 5,738063), and claim 2 as being unpatentable over Kobayashi (JP 06-017040) in view of Richard et al. (US 5,738063) and "Guidelines for the use of Hydrocarbon Refrigerants in Static Refrigeration and Air Conditioning Systems" (ACRIB).

Upon entry of the amendments in this response, the specification, and claims 1 and 2 are amended. Applicants believe that the foregoing amendments do not introduce new matter. Thus, reconsideration of those claims is respectfully requested.

II. Response to Objections and Rejections

A. Rejections under 35 U.S.C. 112, ¶ 2

The Office Action rejected claims 1 and 2 under 35 U.S.C. § 112, ¶ 2, as being indefinite. The Examiner asserts that there is not clear definition in the disclosure for the term "combustible nature refrigerant" recited in the claims. According to the Examiner's request, Applicants made corrections in claims by replacing the phrase "nature refrigerant" with "hydrocarbon refrigerant" in the claims and specification.

Applicants therefore respectfully submit that the grounds of rejections have been addressed and the rejections overcome. Reconsideration and withdrawal of the rejections are respectfully requested.

B. Rejections under 35 U.S.C. § 103(a)

The Office Action rejected, under 35 U.S.C. § 103(a), claim 1 as being unpatentable over Kobayashi (JP 06-017040) in view of Richard et al. (US 5,738063), and claim 2 as being unpatentable over Kobayashi (JP 06-017040) in view of Richard et al. (US 5,738063) and "Guidelines for the use of Hydrocarbon Refrigerants in Static Refrigeration and Air Conditioning Systems" (ACRIB). Applicants respectfully traverse the rejection as applied to the claims for at least the reasons set forth below.

In determining the differences between the prior art and the claimed invention, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. M.P.E.P. § 2141.

The claimed invention, as recited in claims 1 and 2, provides a refrigerating device that "uses a refrigerant mixture consisting essentially of a combustible hydrocarbon refrigerant and a carbon dioxide refrigerant" (emphases added), which excludes any other "essential" component in the mixture.

Richard et al., however, are directed to refrigerant blends having characteristics similar to chlorodifluoromethane (HCFC-22) (abstract). The refrigerant blends contain three components

(col. 3, lines 31-50), and the third component is a hydrofluorocarbon having 1 to 3 carbon atoms. Even though the first two components could be propane and carbon dioxide (examples 51, 55, 63, 67 and 71 in Table 2), the third component is added "to completely eliminate the flammability of such components" and for "the resulting ternary composition to have a zero ozone depletion potential and have a boiling point comparable to that of HCFC-22" (col. 3, lines 11-16). In other words, Richard et al. teach that the third component is essential for the refrigerant blends to have characteristics similar to HCFC-22. Therefore, Richard et al. make no suggestion or motivation to one of ordinary skills in the art to use a refrigerant blends without the third component. Thus, there is no requisite suggestion or motivation to combine the Richard et al.'s refrigerator with Kobayashi's refrigerant. Accordingly, claims of this invention are not rendered obvious over the cited prior art references.

Therefore, claim 1 or 2 is not rendered obvious over the prior art references. Accordingly, Applicants respectfully submit that the grounds of rejection have been addressed and the rejection has been overcome. Reconsideration and withdrawal of the rejection are respectfully requested.

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
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